Lake Erie Harmful Algal Bloom Bulletin

23 September, 2019, Bulletin 25

Analysis

The *Microcystis* cyanobacteria bloom in the western basin of Lake Erie continues to decline. Conditions observed since last week (9/19-9/22) allowed surface chlorophyll to increase (9/21), but was followed by mixing (9/22). Recent satellite imagery (9/21), shows the bloom is present just offshore the Michigan coast from Maumee bay to William C. Sterling State Park; and along the Ohio coast 3-5 miles offshore from Magee Marsh Wildlife Area. *Microcystis* concentrations are below detection in most areas, but remain detectable in Maumee Bay. Measured toxin concentrations are below the recreational threshold throughout the bloom extent. The persistent cyanobacteria bloom in Sandusky Bay continues.

Forecasts

Winds (5-25 kn) forecast today through Thursday (9/23-25) will promote mixing and net eastern transport of remaining surface *Microcystis* concentrations. -Keeney, Jima

Additional Resources

To find a safe place for recreation, visit the Ohio DOH "BeachGuard" site: *http://publicapps.odh.ohio.gov/beachguardpublic/*
Ohio EPA's site on harmful algal blooms: *http://epa.ohio.gov/HAB-Algae*
NOAA's GLERL provides additional HAB data here: *http://www.glerl.noaa.gov/res/HABs_and_Hypoxia*

The images below are "GeoPDF". Please visit https://go.usa.gov/xReTC for instructions on viewing longitude and latitude.

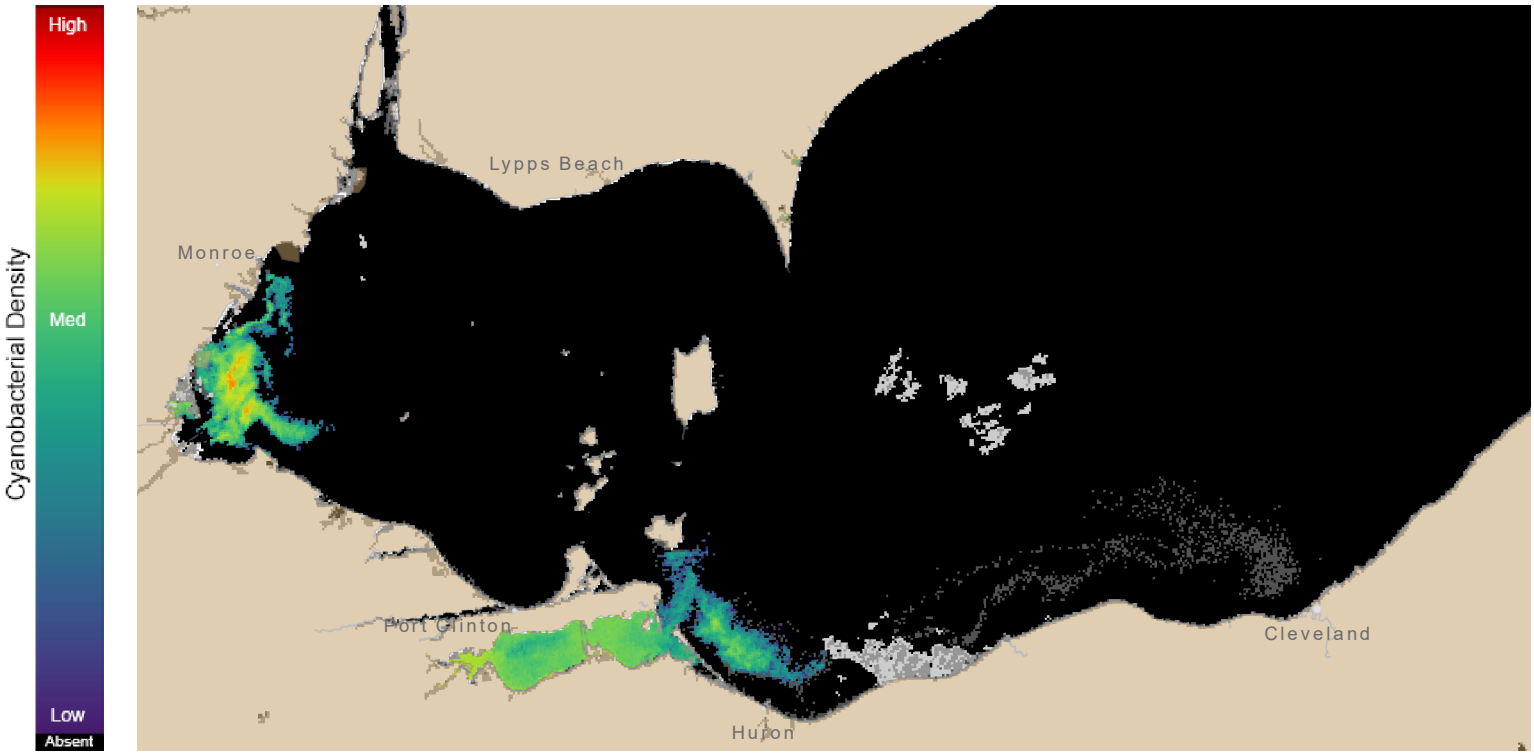


Figure 1. Cyanobacterial Index from modified Copernicus Sentinel 3 data collected 21 September, 2019 at 11:57 EST. Grey indicates clouds or missing data. The estimated threshold for cyanobacteria detection is 20,000 cells/mL.

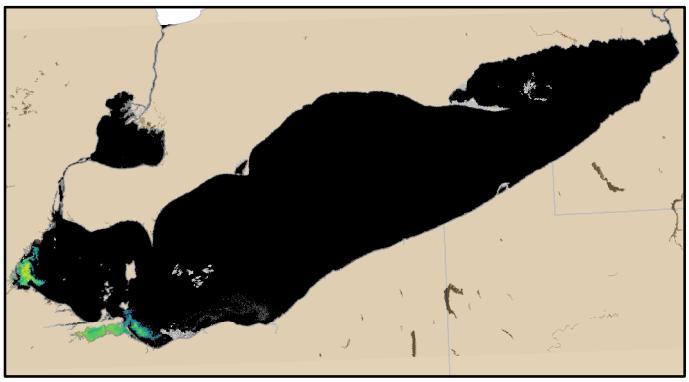
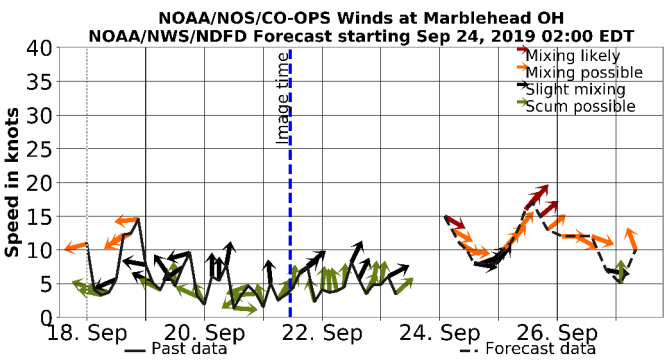


Figure 2. Cyanobacterial Index from modified Copernicus Sentinel 3 data collected 21 September, 2019 at 11:57.

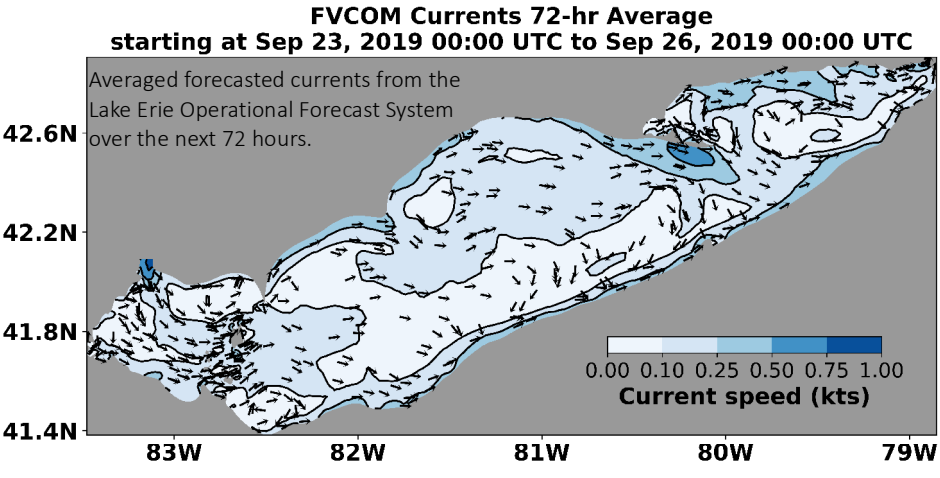


Wind speed and direction from Marblehead, OH. Blooms mix through the water column at wind speeds greater than 15 knots (or 7.7 m/s).

For more information and to subscribe to this bulletin, go to: https://tidesandcurrents.noaa.gov/hab/lakeerie.html

Figure 3. Nowcast position of bloom for 23 September, 2019 using LEOFS modelled currents to move the bloom from the 21 September,

Figure 4. Forecast position of bloom for 26 September, 2019 using LEOFS modelled currents to move the bloom from the 21 September,



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